

WHAT IS CLAIMED IS:

1. Method of allocating resources available on a computer system to run a plurality of program units concurrently, comprising:

a step of receiving a request for running a program unit;

a step of obtaining parameters that represent the attributes of the program unit;

a step of allocating resources required to run the program unit, based on a resource allocation table and a cache management table as well as the parameters;

a step of registering results of the allocating resources into the resource allocation table; and

a step of registering an allocated storage domain of a cache memory to be used for the program unit into the cache management table.

2. The method of allocating resources according to claim 1, wherein:

the parameters give positional information for a principal part to be executed at a high frequency in the program unit;

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the step of allocating resources determines an address of area to be used for the program unit in the main

storage, based on the address reference information and the cache management table as well as the parameters.

4. An operating system capable of running a plurality of program units concurrently:

when receiving a request for running a new program unit, the operating system carrying out:

obtaining parameters that represent the attributes of the program unit;

allocating resources required to run the program unit, based on a resource allocation table and a cache management table as well as the parameters;

registering results of the allocating resources into the resource allocation table; and

registering an allocated storage domain of a cache memory to be used for the program unit into the cache management table.

5. The operating system according to claim 4, wherein:

the cache memory has entry address domains, each of which is specified by an entry address;

the parameters give positional information for a principal part to be executed at a high frequency in the program unit;

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the resource allocation table has address reference information on a main storage to be used for program units;

the cache management table lists addresses of the cache memory and program units mapped in cache address domains; and

the allocating resources determines an address of area to be used for the program unit in the main storage, ensuring that an entry address to be assigned for the principal part to be executed at a high frequency in the program unit differs from an entry address assigned for any part to be executed at a high frequency in any program unit other than the program unit, based on the positional information for the principal part, the address reference information, and the contents of the cache management table.

6. The operating system according to claim 4, wherein:

the cache memory has a plurality of pages;

the resource allocation table has address reference information on a main storage to be used for program units;

the cache management table lists pages of the cache memory and program units mapped in cache pages; and

the allocating resources determines an address of area to be used for the program unit in the main storage, based on the positional information for the principal part,

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the address reference information, and the contents of the cache management table.

7. The operating system according to claim 6, wherein:

rewriting of a cache page register is performed, according to the contents of the cache management table, when the control of execution transfers from the program unit to another program unit.

8. The operating system according to claim 6 ~~or 7~~, wherein:

the allocating resources includes determining the number of pages of the cache memory to be assigned for the program unit, based on execution priority information that is given by some of the parameters.

9. The operating system according to claim 6 ~~or 7~~, wherein:

the allocating resources includes determining the number of program units to be mapped for a specific page of the cache memory, based on execution priority information that is given by some of the parameters.

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10. A computer system including a cache memory, a CPU, and storage: the computer system operating under the control of an operating system stored into the storage,

when the computer system receives a request for running a program unit, the operating system carrying out:

obtaining parameters that represent the attributes of the program unit;

allocating resources required to run the program unit, based on a resource allocation table and a cache management table as well as the parameters;

registering results of the allocating resources into the resource allocation table; and

registering an allocated storage domain of a cache memory to be used for the program unit into the cache management table.

11. The computer system according to claim 10, wherein:

the cache memory has entry address domains, each of which is specified by an entry address;

the parameters give positional information for a principal part to be executed at a high frequency in the program unit;

the resource allocation table has address reference information on a main storage to be used for program units;

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the cache management table lists addresses of the cache memory and program units mapped in cache address domains; and

the allocating resources determines an address of area to be used for the program unit in the main storage, ensuring that an entry address to be assigned for the principal part to be executed at a high frequency in the program unit differs from an entry address assigned for any part to be executed at a high frequency in any program unit other than the program unit, based on the positional information for the principal part, the address reference information, and the contents of the cache management table.

12. The computer system according to claim 10, wherein:

the cache memory has a plurality of pages;

the resource allocation table has address reference information on a main storage to be used for program units;

the cache management table lists pages of the cache memory and program units mapped in cache pages; and

the allocating resources determines an address of area to be used for the program unit in the main storage, based on the address reference information and the contents of the cache management table as well as the parameters.

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13. A computer system including a CPU, a cache memory, and storage and running a plurality of program units concurrently:

the computer system having a resource allocation table into which results of allocating resources are registered and a cache management table into which allocated storage domains of the cache memory are registered;

the storage including an area for storing an operating system that controls the computer system; and

when running one of the plurality of program units, the operating system obtaining parameters for the program unit and allocating resources for the program unit, based on the contents of the resource allocation table and the cache management table as well as the parameters.

14. The computer system according to claim 13, wherein:

the cache memory has entry address domains, each of which is specified by an entry address;

the parameters give positional information for a principal part to be executed at a high frequency in the program unit;

the resource allocation table has address reference information on a main storage to be used for program units;

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the cache management table lists addresses of the cache memory and program units mapped in cache address domains; and

the allocating resources determines an address of area to be used for the program unit in the main storage, ensuring that an entry address to be assigned for the principal part to be executed at a high frequency in the program unit differs from an entry address assigned for any part to be executed at a high frequency in any program unit other than the program unit, based on the positional information for the principal part, the address reference information, and the contents of the cache management table.

15. The computer system according to claim 13, wherein:

the cache memory has a plurality of pages;

the resource allocation table has address reference information on a main storage to be used for program units;

the cache management table lists pages of the cache memory and program units mapped in cache pages; and

the allocating resources determines an address of area to be used for the program unit in the main storage, based on the address reference information and the contents of the cache management table as well as the parameters.

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when the computer system runs one of the plurality of program units, the operating system allocating resources for the program unit, ensuring that an entry address of a cache memory to be used for the principal part of the program unit differs from an entry address of the cache memory used for the principal part of one of the plurality of program units other than the program unit.

the allocating resources is executed by means of resource allocation included in the operating system.

the operating system has been stored into storage of the computer system.

when running one of the plurality of program units, the computer system allocating resources for the program unit, based on the operating system, ensuring that an entry

address of a cache memory to be used for the principal part of the program unit differs from an entry address of the cache memory used for the principal part of one of the plurality of program units other than the program unit.

20. The computer system according to claim 19,
wherein:

the allocating resources is executed by means of resource allocation that exists in the computer system.

21. The computer system according to claim 20,
wherein:

the means of resource allocation is included in the operating system.

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